WHAT IS CLAIMED IS:

1. A frame memory device which sequentially receives raster-scanned digital color image signals, and sequentially stores the image signals in a memory having a two-dimensional address structure, such that vertical addresses represent the order of entry of respective scan lines that constitute said image signals and horizontal addresses represent the order of entry of respective signals that belong to each of the scan lines, and which sequentially reads out the stored signals from said memory so as to output the signals again as raster-scanned signals, said frame memory device being characterized by comprising:

signal rearranging means for rearranging the order of received signals to be stored in said memory; and

subsampling and read-out means for reading out stored signals while skipping horizontal and vertical addresses of said memory at regular intervals, whereby the stored image signals that are subsampled are read out from said memory so as to output raster-scanned image signals at lower resolution than that of the received image signals.

2. A frame memory device according to Claim 1, wherein the received image signals comprise YC_BC_R color signals having a sampling ratio of 4:2:2, in which the number of horizontal pixels of C_B and C_R signals is equal to one half that of Y signals, and wherein the Y signals and the C_B and

C_R signals are input and output in parallel with each other from a Y bus and a C bus, respectively, and the Y signals and C_B and C_R signals of a frame of said image signals are written into and read out from a Y memory and a C memory, respectively, constituting said memory, with the Y and C signals transmitted in parallel with each other, said C_B and C_R signals being multiplexed at alternate pixels and input and output from the C bus in the order of $C_B \rightarrow C_R$, and being characterized in that:

said signal rearranging means rearranges the C_B and C_R signals in the order of $C_B \rightarrow C_B \rightarrow C_R \rightarrow C_R$ to alternate the signals at every other pixel, and the C_B and C_R signals rearranged by said means are synchronized with the Y signals so that the Y and C signals are respectively written into said Y memory and said C memory in parallel with each other, and in that said subsampling and read-out means accesses alternate ones of horizontal and vertical addresses of said Y memory and C memory to read out the Y and C signals in parallel with each other, thereby to output raster-scanned YC_BC_R image signals that have been subsampled to one half in both horizontal and vertical directions by said subsampling and read-out means.

3. A frame memory device according to Claim 1, wherein the received image signals comprise YC_BC_R color signals having a sampling ratio of 4:2:2, in which the number of horizontal pixels of C_B and C_R signals is equal to one half

that of Y signals, and wherein the Y signals and the C_B and C_R signals are input and output in parallel with each other from a Y bus and a C bus, respectively, and the Y signals and C_B and C_R signals of a frame of said image signals are written into and read out from a Y memory and a C memory, respectively, constituting said memory, with the Y and C signals transmitted in parallel with each other, said C_B and C_R signals being multiplexed at alternate pixels and input and output from the C bus in the order of $C_R \rightarrow C_B$, and being characterized in that:

said signal rearranging means rearranges the C_B and C_R signals in the order of $C_R \rightarrow C_R \rightarrow C_B \rightarrow C_B$ to alternate the signals at every other pixel, and the C_B and C_R signals rearranged by said means are synchronized with the Y signals so that the Y and C signals are respectively written into said Y memory and said C memory in parallel with each other, and in that said subsampling and read-out means accesses alternate ones of horizontal and vertical addresses of said Y memory and C memory to read out the Y and C signals in parallel with each other, thereby to output raster-scanned YC_BC_R image signals that have been subsampled to one half in both horizontal and vertical directions by said subsampling and read-out means.

4. A frame memory device according to Claim 2, characterized in that horizontal scan frequency and vertical scan frequency of the image signals generated in a raster

scanning scheme from the frame memory device are equal to those of NTSC or PAL television signals.

5. A frame memory device according to Claim 3, characterized in that horizontal scan frequency and vertical scan frequency of the image signals generated in a raster scanning scheme from the frame memory device are equal to those of NTSC or PAL television signals.

6. A method of outputting raster-scanned digital color image signals at lower resolution than that of sequentially received raster-scanned digital color image signals, comprising:

rearranging the order of received signals;

sequentially storing the rearranged signals in a memory having a two-dimensional address structure, such that vertical addresses represent the order of entry of respective scan lines that constitute the received image signals and horizontal addresses represent the order of entry of respective signals that belong to each of the scan lines; and

subsampling and reading out stored signals while skipping horizontal and vertical addresses of said memory at regular intervals;

wherein the rearranging and subsampling are correlated so as to output raster-scanned image signals at lower resolution than that of the received image signals.

7. A method according to Claim 6, wherein the received image signals comprise YC_BC_R color signals having a sampling ratio of 4:2:2, in which the number of horizontal pixels of C_B and C_R signals is equal to one half that of Y signals, and wherein the Y signals and the C_B and C_R signals are input and output in parallel with each other from a Y bus and a C bus, respectively, and the Y signals and C_B and C_R signals of a frame of said image signals are written into and read out from a Y memory and a C memory, respectively, constituting said memory, with the Y and C signals transmitted in parallel with each other, and wherein the C_B and C_R signals are multiplexed at alternate pixels and input and output from the C bus in the order of $C_B \rightarrow C_R$ and the received C_B and C_R signals are rearranged in the order of $C_B \rightarrow C_B \rightarrow C_R \rightarrow C_R$ to alternate the signals at every other pixel, and the rearranged $C_B \rightarrow C_R$ signals are synchronized with the Y signals so that the Y and C signals are respectively written into said Y memory and said C memory in parallel with each other, and wherein the subsampling and reading out accesses alternate ones of horizontal and vertical addresses of said Y memory and C memory to read out the Y and C signals in parallel with each other, thereby to output raster-scanned YC_BC_R image signals that have been subsampled to one half in both horizontal and vertical directions.

8. A method according to Claim 6, wherein the received image signals comprise YC_BC_R color signals having a sampling ratio of 4:2:2, in which the number of horizontal pixels of C_B and C_R signals is equal to one half that of Y signals, and wherein the Y signals and the C_B and C_R signals are input and output in parallel with each other from a Y bus and a C bus, respectively, and the Y signals and C_B and C_R signals of a frame of said image signals are written into and read out from a Y memory and a C memory, respectively, constituting said memory, with the Y and C signals transmitted in parallel with each other, and wherein the C_B and C_R signals are multiplexed at alternate pixels and input and output from the C bus in the order of $C_R \rightarrow C_B$ and the received C_B and C_R signals are rearranged in the order of $C_R \rightarrow C_R \rightarrow C_B \rightarrow C_B$ to alternate the signals at every other pixel, and the rearranged $C_R \rightarrow C_B$ signals are synchronized with the Y signals so that the Y and C signals are respectively written into said Y memory and said C memory in parallel with each other, and wherein the subsampling and reading out accesses alternate ones of horizontal and vertical addresses of said Y memory and C memory to read out the Y and C signals in parallel with each other, thereby to output raster-scanned YC_BC_R image signals that have been subsampled to one half in both horizontal and vertical directions.

9. A method according to Claim 7, wherein signals are read out from said memory in a raster-scanning scheme having horizontal and vertical scan frequencies equal to those of NTSC or PAL television signals.

10. A method according to Claim 8, wherein signals are read out from said memory in a raster-scanning scheme having horizontal and vertical scan frequencies equal to those of NTSC or PAL television signals.

11. A method of writing and reading image signals, comprising the steps of:

dividing horizontal and vertical addresses of an address region of a memory storing the image signals into a plurality of blocks each having a predetermined number of addresses as a unit;

reading the image signals from each of said plurality of blocks, while skipping read-out addresses at predetermined intervals and subsampling the image signals; and

when the image signals are written into the memory, rearranging the image signals in an order that is determined based on the predetermined intervals at which the read-out addresses are skipped.

12. A method of writing and reading image signals according to Claim 11, wherein said image signals comprise raster-scanned color image signals having YC_BC_R signal components at a ratio of 4:2:2, and wherein said memory comprises a Y memory area that stores Y signals, and a C memory area that stores C_B signals and C_R signals, said Y signals being stored in the Y memory area of the memory without being rearranged, said C_B signals and C_R signals being rearranged in an order that is determined based on the predetermined intervals at which the read-out addresses are skipped, and stored in the C memory area of the memory.

13. A method of writing and reading image signals, comprising the steps of:

dividing horizontal and vertical addresses of a memory that stores raster-scanned color image signals having YC_BC_R signals at a ratio of 4:2:2, into a plurality of blocks each having 2m successive addresses as a unit, where m is a first integer;

reading the color image signals stored at 2n addresses from each of said plurality of blocks, while skipping the addresses at predetermined intervals, n being a second integer, said first integer and said second integer being prime to each other, said first integer being larger than said second integer; and

when the color image signals are stored in said memory, storing Y signals into the memory in an order of entry

without performing rearrangement, while rearranging C_BC_R signals in an order which is different from an order of entry and is determined based on the predetermined intervals at which the addresses are skipped, and storing the rearranged C_BC_R signals into the memory.

14. A memory device comprising:

a memory having a two-dimensional address structure;

writing means for sequentially receiving raster-scanned color image signals, and writing the color image signals into said memory such that vertical addresses of the memory represent an order of entry of scan lines that constitute the color image signals, and horizontal addresses of the memory represent an order of entry of the color image signals that belongs to each of the scan lines;

reading means for sequentially reading out the stored color image signals from said memory, to output the signals as said raster-scanned color image signals; and

signal rearranging means connected to an input terminal of said writing means, for changing an order of the color image signals to be entered into the writing means;

wherein said reading means reads out the color image signals stored in said memory while subsampling the signals by skipping the horizontal addresses and vertical addresses of the memory at predetermined intervals.

15. A memory device according to Claim 14, wherein said predetermined intervals are regular intervals.

16. A memory device according to Claim 14, wherein the color image signals comprise raster-scanned color image signals having YC_BC_R signal components at a ratio of 4:2:2, and wherein said signal rearranging means rearranges the color image signals in an order that is determined based on said predetermined intervals at which the addresses are skipped when the color image signals stored in the memory are subsampled and read out.

17. A memory device comprising:

a memory that stores raster-scanned color image signals having YC_BC_R signal components at a ratio of 4:2:2, said memory comprising a Y memory that stores Y signals of the color image signals, and a C memory that stores C_B and C_R signals of the color image signals;

a C bus through which the C_B and C_R signals of the color image signals are transmitted while being alternately multiplexed;

a Y bus through which the Y signals of the color image signals are transmitted in synchronization with C_B and C_R signals transmitted through said C bus;

signal rearranging means connected to said C bus, for rearranging the multiplexed C_B and C_R signals to alternate the signals at every other pixel;

writing means for writing the Y signals from said Y bus, and the C_B and C_R signals rearranged by said signal rearranging means, into said Y memory and said C memory, respectively, in an order of raster-scanning; and

reading means for reading out the Y signals and C_B and C_R signals respectively stored at every other pixel in the Y memory and the C memory in the order of raster-scanning.

18. A memory device according to Claim 17, wherein an order of input and output of the C_B and C_R signals on said C bus and an order of rearrangement of the C_B and C_R signals by said signal rearranging means are determined based on the C_B signals.

19. A memory device according to Claim 17, wherein an order of input and output of the C_B and C_R signals on said C bus and an order of rearrangement of the C_B and C_R signals by said signal rearranging means are determined based on a selected one of the C_B signals and the C_R signals.

20. A memory device according to Claim 17, wherein horizontal scan frequency and vertical scan frequency of the image signals read out from said memory in a raster-scanning scheme by said reading means are respectively equal to horizontal scan frequency and vertical scan frequency of NTSC or PAL television signals.

21. A memory device according to Claim 18, wherein horizontal scan frequency and vertical scan frequency of the image signals read out from said memory in a raster-scanning scheme by said reading means are respectively equal to horizontal scan frequency and vertical scan frequency of NTSC or PAL television signals.

22. A memory device according to Claim 19, wherein horizontal scan frequency and vertical scan frequency of the image signals read out from said memory in a raster-scanning scheme by said reading means are respectively equal to horizontal scan frequency and vertical scan frequency of NTSC or PAL television signals.